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A VALIDATION OF THE CONTINGENCY MODEL  
APPROACH TO LEADERSHIP EXPERIENCE AND  
TRAINING

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13. ABSTRACT This study is a validation of the hypothesis supported by a previous study that leadership training and experience may be viewed as altering the favorableness of the leadership situation. This means that training and experience will improve the performance of some leaders, while decreasing that of others. In the field artillery study, it was found that <u>low</u> LPC leaders showed better performance than <u>high</u> LPC leaders in favorable situations. In other words, training was detrimental for the high LPC leaders. In the intermediate situations, trained and experienced <u>high</u> LPC leaders performed better, while in unfavorable situations, <u>low</u> LPC leaders with <u>little</u> training and experience performed better. The present study, involving 58 naval aviation maintenance supervisors from Whidbey Island Naval Air Station supports the earlier findings in the field artillery study.			

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#### Abstract

This study is a validation of the hypothesis supported by a previous study that leadership training and experience may be viewed as altering the favorableness of the leadership situation. This means that training and experience will improve the performance of some leaders, while decreasing that of others. In the field artillery study, it was found that low LPC leaders showed better performance than high LPC leaders in favorable situations. In other words, training was detrimental for the high LPC leaders. In the intermediate situations, trained and experienced high LPC leaders performed better, while in unfavorable situations, low LPC leaders with little training and experience performed better. The present study, involving 58 naval aviation maintenance supervisors from Whidbey Island Naval Air Station supports the earlier findings in the field artillery study.

A VALIDATION OF THE CONTINGENCY MODEL APPROACH  
TO LEADERSHIP EXPERIENCE AND TRAINING<sup>1</sup>

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A review of the research literature to date provides little encouragement for leadership training as a means for improving organization performance (Campbell, et al., 1970). The techniques have been numerous and varied, but none deal with leadership training designed to improve leader performance. None have applied themselves to the question of what leadership training will increase the leader's effectiveness. The Contingency Model, however, suggests a possible explanation as to why leadership training has not been as effective as desired (Fiedler, 1970a). This theory of leadership effectiveness postulates that an organization's effectiveness is contingent upon two interacting factors. These are (a) the motivational pattern or leadership style, as measured by the Least Preferred Coworker (LPC) score, and (b) the favorableness of the leadership situation, i.e., the degree to which the situation itself provides the leader with power and influence. The theory holds that the task-motivated (low LPC) leaders perform best in very favorable and in unfavorable situations, while the relationship-motivated (high LPC) leaders perform best in situations of intermediate favorableness (Fiedler, 1964, 1967, 1972).

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This formulation has a number of implications which are of relevance for our understanding of leadership training. First, it implies that both the task-motivated and the relationship-motivated leaders will be effective in some situations but not in others. Second, it suggests that we can change organizational performance either by training the leader to adopt a new motivational system each time he comes into a new leadership situation, or that we can change certain aspects of the situation in order to "match" it to the leader's motivational pattern (Fiedler, 1967). Both of these alternatives have problems. Changing the leader's motivational pattern seems, at best, a very difficult and time-consuming affair since we are almost certainly dealing with fairly deeply ingrained aspects of personality organization. "Engineering the job" presents difficulties since we cannot always modify the task situation in just the right way.

However, the Contingency Model suggests one further solution. We have generally viewed leadership training as a means of changing the leader. We can also reconceptualize leadership training as a means of improving the situational favorableness. Seen in this light, it becomes understandable why previous attempts to show the effects of leadership training have been unsuccessful: situations in which relationship-motivated (high LPC) leaders will succeed as a result of training will be those in which task-motivated (low LPC) leaders will become less successful; and conversely, situations in which training will benefit low LPC leaders will be those in which training will degrade the performance of high LPC leaders.

The Contingency Model has been extensively described in previous publications (e.g., Fiedler, 1964, 1967, 1972). The present paper will



confine itself, therefore, to a brief review of the theory's aspects which are essential to the understanding of the present study.

The LPC score. The Least Preferred Coworker (LPC) score is used as the measure of leadership motivation. The most recent interpretation of this score is as an index of a hierarchy of goals or motivation. The low LPC individual (who is basically task-motivated) has as his primary goal in unfavorable situations the attainment of task-related goals while the high LPC individual (who is basically relationship-motivated) will seek the attainment of close interpersonal relations (Fiedler, 1972). The score is obtained by asking an individual to think of all those with whom he has ever worked and then to describe the one person with whom he found it most difficult to work on a common task.

Situational favorableness is defined by the degree to which (1) the leader feels or is accepted by his group members, (2) the task is structured, and (3) the leader has power over his group members. These dimensions resulted in eight situational favorability cells which were derived from a composite of all the studies included in the Contingency Model. The Model postulates that task-motivated leaders perform better in highly favorable and unfavorable situations, and that relationship-motivated leaders perform better in situations of intermediate favorability. The eight cells of the Contingency Model are generalised as follows:

High Situational Favorability:	Octants 1, 2, 3
Intermediate Situational Favorability:	Octants 4, 5, 6
Low Situational Favorability:	Octants 7, 8

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Insert Figure 1 about here  
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Figure 1

### The Field Artillery Study

The reconceptualization of leadership training and experience in light of the Contingency Model led to a study involving 55 section chiefs of field artillery crews. That study defined task structure in terms of the leadership training and experience received by the section chiefs. With this conceptualization of the task structure, the study was designed to test hypotheses supporting previous findings of a curvilinear relationship between LPC and performance given various situational favorabilities (See Figure 1). In all cases, the hypotheses were supported. Under good leader-member relations, low LPC leaders performed best regardless of the training and experience. On the other hand, even trained and experienced high LPC leaders performed relatively poorly. Under conditions of moderately poor leader-member relations, experienced and trained high LPC leaders and inexperienced and untrained low LPC leaders performed best. The study supported the notion that training and experience affect the favorableness of the leadership situation. It also showed, as the Contingency Model would predict, that training and experience can actually decrease performance in some situations.

### The Naval Aviation Maintenance Crew Study

The present study, then, was primarily designed to validate the previous findings with field artillery crew chiefs. The method and analysis was identical to the first study. As in the field artillery study, the relative degree of structure of the task was determined by the technical training that an individual had received. An individual with relatively little or no training should find a specific task situation unstructured regardless of the formal job definition by the organization. Therefore, the task

structure dimension will be affected by technical training that is relevant to the task confronting the leader. The specific hypotheses with regard to training are as follows:

Hypothesis I: Given that the leader member relationship is good and the leader position power strong (Cells 1 and 3), there will be a negative correlation between LPC and performance for both trained and untrained leaders.

Hypothesis II: Given that the leader-member relationship is moderately poor and the leader position power strong (Cells 5 and 8), there will be a positive correlation between LPC and performance for trained leaders and a negative correlation for untrained leaders.

Experience can be viewed in much the same way as training with the exception that in job experience both human relations "training" and technical "training" are present simultaneously. The amount of training received in either category is dependent upon the amount of experience coupled with the relative degree of intelligence of the leader. Intelligence will determine the value of this experience. Individuals with relatively low levels of intelligence will benefit less from experience as a training vehicle than those with high levels of intelligence. As a result, many years of experience can greatly improve a leader's ability to structure the task, given that he has the intelligence to integrate the experience. On the other hand, a lower level of intelligence will hinder the training process so that a leader may not improve his ability to structure the task.

Hypothesis III: Given good leader-member relations and strong leader position power (Cells 1 and 3), there will be a negative correlation for both experienced and inexperienced leaders between LPC and performance regardless of their intelligence.

Hypothesis IV: Given poor leader-member relationships, strong leader position power, and a relatively low intelligence score, there will be a negative correlation between LPC and performance for both experienced and inexperienced leaders (Cell 8).

Hypothesis V: Given poor leader-member relationships, strong leader position power, and a relatively high intelligence score, there will be a positive correlation between LPC and performance for experienced leaders (Cell 5) and a negative correlation for inexperienced leaders (Cell 8).

One further elaboration of the classification system is called for if we deal with leaders who are inexperienced or relatively untrained for their rather technical jobs. As a result of the field artillery study, the untrained, inexperienced and relatively unintelligent leader really finds himself in Octant 8. This was checked with a position power questionnaire administered to the subjects and suggests that the group situation for the leader with low training, low experience and low intelligence has, in effect, low position power as well as low task structure.

### Method

Subjects. The subjects of this study were 58 naval aviation maintenance supervisors of tactical squadrons stationed at Whidbey Island Naval Air Station, Washington. All of these men held positions as chief supervisors in their respective divisions; that is, they were in charge of 8 - 12 maintenance men. The men ranged in age from 19 to 46 years. They had from 1 to 23 years of experience, and from 16 to 180 months experience as maintenance supervisors.

After being given instructions on procedure and clarification of any questions, the men completed a series of questionnaires which were contained in one test booklet. The first part asked for background information on level of education, leadership positions held, and training which they had received during their time in the service. They were also asked to differentiate as much as possible between leadership and technical training. As the data showed, practically none of the men had received any identifiable leadership training either in service or prior to entering the Navy. Most of the training was technical in nature. The average number of weeks of technical training was 26, with a range from 2 to 98.

### Tests and Questionnaires

The Least Preferred Coworker (LPC) scale. Subjects were asked to think of all men with whom they had ever worked, and then to describe the one person with whom they could work least well. These descriptions were made on a standard 16-item, bi-polar adjective scale. A high LPC score is interpreted to indicate relationship motivation, that is, a basic motivation to be related to others, which manifests itself in statements

and behaviors indicating concern for establishing close interpersonal relations in stressful or unfavorable situations. In situations which are relatively favorable, high LPC persons tend to be self-oriented and concerned with attaining a position of prominence, which reflects their secondary goal. A low LPC score indicates task motivation, which again manifests itself in concern for task accomplishment in stressful and unfavorable situations. In favorable, relaxed situations, low LPC persons tend to be concerned with developing pleasant relations with their subordinates. This score is a key variable in the Contingency Model, and has been extensively described elsewhere.

Group Atmosphere score (GA). This score is obtained by asking individuals to describe on a 10-item scale, similar to the LPC scale, the group with which they are now working. The score reflects the degree to which the leader feels that the group is loyal and supportive of him (McNamara, 1968). For purposes of this study, the cutting score of high versus low GA was based on Posthuma's (1970) finding for real-life groups which showed a median GA score of .655.

Intelligence. Intelligence scores based on the General Classification Test were obtained from personnel records. The tests showed these men to be of average intelligence with scores ranging from 31 to 72.

#### Situational Favorableness

The task of the supervisors is the supervision of an eight-man crew of enlisted men. The task of the men as well as the supervisor is spelled out in considerable detail, although the nature of the task involves numerous technical problems of varying complexity. While the task can be considered to be structured by usual standards (e.g., Hunt,

1964), a man who is completely untrained and inexperienced is clearly incapable of supervising either the crew or the technical aspects of handling and maintaining the gun. For the purposes of this study, as in the field artillery study, the individual is seen as able to structure the task if he has received adequate training. He can utilize his leadership experience provided he has the requisite intelligence to assimilate and integrate his experience, or to learn from his experience. The study, therefore, considers task structure as depending upon the individual's ability to deal with the task rather than as inherent in the nature of the task.

#### Performance Measures

The criterion of leadership performance consisted of effectiveness ratings given by independent and knowledgeable judges, namely, the maintenance officers and warrant officers in charge of these shops. These ratings were based on nine subscales coupled with a ranking of the importance of each of the subscales. Since we found differences in mean ratings between the two squadrons which did not seem to reflect better overall performance by one squadron as compared to the other, the ratings were standardized to equalize means and standard deviations.

### Results

#### Hypotheses I and II

In testing the first hypothesis, we are dealing with a favorable situation for the leader who has good leader-member relations and strong position power. The task structure according to this study must be defined in terms of the technical training. In terms of Fiedler's Contingency Model, the training will have different effects depending



upon both the leadership style (LPC) and the situation. Therefore, when an individual has received training, he should be able to structure the task much more readily. However, if he has had very little or no training, the individual should find it difficult to structure the task. This structured or unstructured task leads to different levels of performance for high and low LPC leaders. This was found to be the case: given good leader-member relations, strong position power and high training (structured task - Octant 1), the task-motivated (low LPC) subjects performed significantly better than did relationship-motivated (high LPC) leaders (Table 1). In the low training group (unstructured task - Octant 3), the task-motivated (low LPC) leaders also performed significantly better than high LPC leaders (Table 1). As hypothesized, the task-motivated leaders perform better in favorable situations and training makes no difference since under both conditions the situation appears right for their leadership style.

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Insert Table 1 about here  
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Under conditions where the leader-member relationship is moderately poor, the leader confronts situations of intermediate and low favorability. Here, task-motivated and relationship-motivated (low and high LPC) leaders perform differently. The high LPC subjects performed significantly better when they had received training (structured task - Octant 5). However, when subjects had relatively little or no training (unstructured task - Octant 8), the low LPC persons performed better (Table 1).

TABLE 1  
Correlations between Performance and LPC for the  
High and Low Training Conditions

		Leader-Member Relations	
		Good	Moderately Poor
<u>Training</u>  <u>of</u>  <u>Leaders</u>	High	-.50*	.67*
		N = 14	N = 12
		Octant 1	Octant 5
	Low	-.57*	-.75**
		N = 14	N = 15
		Octant 3	Octant 7 <sup>1</sup>

\* p .05

\*\*p .005

<sup>1</sup>Octant VII changed to Octant VIII after additional analysis of position power.

Hypotheses III, IV, and V

As indicated above, experience can be seen as on-the-job training, and the task structure dimension can, therefore, be defined in part by experience. We hypothesized, however, that intelligence will determine whether or not leadership experience results in training. Unlike organized training programs, experience can be viewed as an unorganized, complex collection of information which can be helpful to the individual provided he can sort that information into meaningful and relevant "training" data. It is believed that intelligence is the variable which serves as the tool for sorting that information. Individuals with high intelligence will gain from their experience in both helping them to structure the task and to improve leader-member relations. However, experience will offer relatively little in terms of training for the individual with relatively low intelligence. He will be swamped with complex information from which he can sort out very little of use in terms of specific "training" information. On the basis of the Contingency Model and the artillery study, it was again proposed that experience coupled with low intelligence and inexperience will be equivalent to an unstructured task. Experience will then have different effects upon performance depending upon the leader's style (LPC) and the favorability of the situation. Therefore, according to the Contingency Model, when the situation is favorable (good leader-member relations, strong position power, and experience with high intelligence) the task-motivated (low LPC) leader should perform better. Low LPC persons should also perform better when they have little experience, or when they are experienced but have relatively low intelligence. In the latter cases, the task is unstructured and in Octant 3 the Model again predicts a

negative correlation between performance and LPC. In the favorable situation, Octants 1 and 3, experience should make no difference. The data support this hypothesis (Table 2). When the leader-member relations are moderately poor, experience and intelligence have different effects, again depending upon the leadership style. Experience with high intelligence benefits the relationship-motivated (high LPC) individual who performs better in Octant 5. In Octant 8 where individuals have little or no experience, or have experience but have relatively low intelligence, the low LPC leader performs significantly better (Table 2). Some of the correlations are not statistically significant, but are in the predicted direction.

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Insert Table 2 about here  
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The study was designed to validate the effects of training and experience on leadership effectiveness, as first explored in the field artillery study. The interaction of training with leadership style (LPC) provided the initial focus of the research. A new approach to the definition of the task structure dimension in the Contingency Model was proposed. Training has been too often regarded as a vehicle with which to change individual behavior. There is little, if any, evidence that it changes performance (Campbell, et al., 1970). As applied to the Contingency Model, training has been interpreted as a determinant of situational favorableness. The results of this study completely support the earlier findings with the artillery section chiefs at Fort Lewis, Washington. An understanding of the interaction between leadership style and the situation will help to throw light upon the question of why the same training

TABLE 2

## Correlations between Performance and LPC

## HIGH LEADER-MEMBER RELATIONSHIP

		<u>Experience</u>	
		<u>High</u>	<u>Low</u>
<u>Intelligence</u>	High	-.52* (12)	-.56* (13)
	Low	***	***

## LOW LEADER-MEMBER RELATIONSHIP

		<u>Experience</u>	
		<u>High</u>	<u>Low</u>
<u>Intelligence</u>	High	.73* (8)	-.03 (9)
	Low	-.70* (7)	***

(n) = N

\*p &lt; .05

\*\*\*Insufficient Ns

programs have helped some leaders and not others. In view of the present study, training structures the task, and this in turn makes the situation more favorable. This helps the low LPC leader in Octant 1 but aids the high LPC leader in Octant 5. In the same respect, the low LPC individual performs better even when he has had relatively little or no training (Octants 3 and 8). Intelligence does not seem to affect the value of organized training programs.

A second focus of the study was the validation of the experience and intelligence interaction in affecting the favorability of the situation. It has been traditionally held that experience should improve performance. The present study again supports the notion that experience affects situational favorableness. Experience is a very complex phenomenon. The intelligence of the individual will determine what value experience will have in making the situation more favorable. Here again the study supports earlier findings. Figure 2 gives a summary of the effects of training on situational favorability and describes their effects on leadership performance. As can be seen in Figure 2, the training has different effects depending upon the leader's style. In the favorable and unfavorable situations, the low LPC individuals perform better, whereas in the intermediate favorability situation the high LPC individuals do. When the mean performance rating is taken of high and low LPC leaders together, the results show that the average performance is not significantly different between the various cells.

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Insert Figure 2 about here  
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The study also suggests why previous research relating leader intelligence to group performance has yielded such poor results (Mann, 1959).

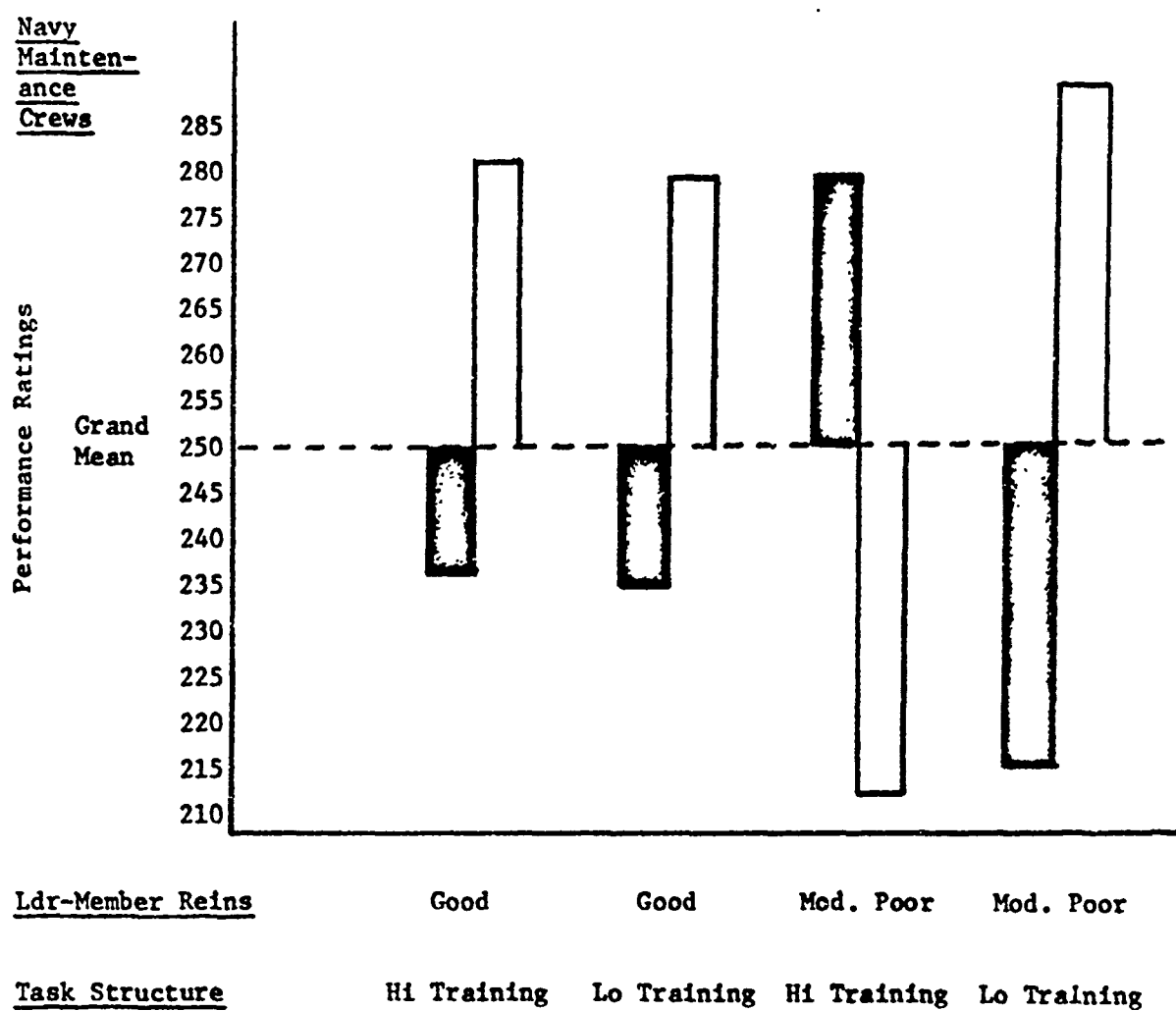


Figure 2

Performance of High and Low LPC Leaders  
under Different Training Conditions

### Limitations of the Study

Although the results of the various analyses lead to some interesting conclusions, a note of caution is in order. The data on amount of training and experience were obtained from the subjects. There may well have been some omissions as well as errors due to memory lapses, etc. by some of the subjects. We dealt with a specific and, perhaps, atypical sample of men, viz., professional soldiers, as well as only one leadership task. The findings, based on a rather general theory, are probably replicable elsewhere, but further research is clearly required.

### Summary and Conclusions

The study was designed to validate earlier findings on the effects of training and experience upon leadership effectiveness. Fifty-eight naval aviation maintenance NCO's of two tactical squadrons at Whidbey Island, Washington were administered a battery of questionnaires to obtain data for the testing of the hypotheses. The criterion was performance ratings by supervisors. Training and experience were used to define the task structure within the framework of Fiedler's Contingency Model. Predictions were then made of performance for task and relationship-motivated subjects for the various octants. The study supported earlier findings on training and experience (Csoka & Fiedler, 1971). Regardless of the inherent structure of the task, untrained and inexperienced individuals will perceive their task as unstructured. In the same manner, experienced individuals with low levels of intelligence will also perceive an unstructured task. The Contingency Model does offer a new approach to leadership training and experience in light of the findings in this study.



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